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ENCLOSED ARE:

- Appeal Brief (26 pages)
- 2 References (39 pages)
- Transmittal Letter (2 pages in duplicate)

APPLICANT: Rezailfar et al.

ASSIGNEE: QUALCOMM Incorporated

SERIAL NO.: 09/494,199

FILED: January 28, 2000

FOR: Method and apparatus for requesting point-to-point protocol (PPP) instances from a packet data services network

Please contact Sheryl Schoen at (858) 658-5102 if all pages do not transmit.

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In Re Application of

Rezaiifar et al.

Serial No. 09/494,199

Filed: January 28, 2000

) For: Method and apparatus for channel
) optimization during point-to-point
) protocol (PPP) session requests
)
)
)

) Group No. 2665

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Attorney Docket No. 000090CIP

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Please charge Deposit Account No. 17-0026 of QUALCOMM Incorporated in the amount of \$500.00. The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment, to said Deposit Account No. 17-0026. A duplicate copy of this letter is enclosed. The Commissioner is further hereby authorized to charge to said Deposit Account No. 17-0026, pursuant to 37 CFR 1.25(b), any fee whatsoever which may become properly due or payable, as set forth in 37 CFR 1.16 to 37 CFR 1.18 inclusive, for the entire pendency of this application without specific additional authorization.

Respectfully submitted,

Dated: February 21, 2006

By: Roberta A. Young
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FEB 21 2006

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:

Ramin Rezaiifar

Serial No.: 09/494,199

Filed: January 28, 2000

For: METHOD AND APPARATUS FOR
CHANNEL OPTIMIZATION DURING
POINT-TO-POINT PROTOCOL (PPP)
SESSION REQUESTS

Confirmation No.: 3141

Examiner: Justin M Philpott

Group Art Unit: 2665

Attorney Docket No.: 000090CIP

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BRIEF ON APPEAL

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Attention: Board of Patent Appeals and Interferences

Sirs:

This brief is submitted pursuant to 37 C.F.R. § 41.37 and in the format required by 37

C.F.R. § 41.37(c) and with the fee required by 37 C.F.R. § 41.20(b)(2):

02/23/2006 TL0111 00000056 170026 09494199

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(1) REAL PARTY IN INTEREST

The real party in interest in the present pending appeal is Qualcomm, Inc., the assignee of the pending application as recorded at Reel 010885, Frame 0786 with the United States Patent and Trademark Office.

(2) RELATED APPEALS AND INTERFERENCES

Neither Appellant, Appellant's representative, nor Assignee is aware of any pending appeal or interference which would directly affect, be directly affected by, or have any bearing on the Board's decision in the present pending appeal.

(3) STATUS OF CLAIMS

Claims 1 through 29 are pending in the application.

No claims were previously cancelled.

No claims were previously withdrawn.

Claims 1 through 29 stand rejected.

No claims are allowed.

The rejections of claims 1 through 29 are being appealed.

(4) STATUS OF AMENDMENTS

No amendments have been filed subsequent to the Final Office Action mailed on June 23, 2005. On September 30, 2005, an amendment was filed under 37 C.F.R. § 1.116 in response to the Examiner's remarks in the Final Office Action of June 23, 2005. No amendments to the claims were proposed in the Remarks. An Advisory Action mailed on November 3, 2005 found the arguments unpersuasive and maintained the rejection of claims 1 through 29.

(5) SUMMARY OF CLAIMED SUBJECT MATTER

The invention relates generally to channel optimization during point-to-point (PPP) session requests. (Specification, page 1, lines 17-19). Specifically, the invention as presently claimed in pending independent claim 1, and claim 2 depending therefrom, relates to a method of optimizing radio-access-network-packet-data-service-node interface communications channel resources in a communications network when a mobile station moves from a first infrastructure element to a second infrastructure element associated with a packet data services node of the communications network. (Specification, page 6, lines 21-27). The method includes transmitting from the second infrastructure element associated with the packet data services node a message including a number of dormant network connections associated with the mobile station and a reduced list of identifiers associated with the dormant network connections. (Specification, page 11, lines 21-27). Furthermore, the dormant network connections are connections that are not being used to transmit traffic channel data. (Specification, page 11, lines 4-7).

Another embodiment of the present invention as claimed in pending independent claim 3, and claim 4 depending therefrom, relates to a method of simplifying Packet Control Function network element functionality when a mobile station moves from a first infrastructure element of a packet data services network to a second infrastructure element of the packet data services network. (Specification, page 9, lines 26-28; page 5, lines 12-17). The method includes maintaining a reduced entry PPP connection table that includes radio access network (RAN) PDSN interface (RPI) communication pipe identifiers. (Specification, page 11, lines 28-33).

A further embodiment of the present invention as claimed in pending independent claim 5, and claims 6-8 depending therefrom, relates to a method of optimizing the Air Interface traffic channel resources in a communications network when a mobile station moves from a first infrastructure element of a packet data services network to a second infrastructure element of the packet data services network. (Specification, page 5, lines 18-25). The method includes transmitting from the mobile station a message including a number of dormant network connections associated with the mobile station and enhanced information associated with the dormant network connections when the mobile station moves from a first infrastructure element of the packet data services network to a second infrastructure element. (Specification, page 12, lines 13-15; page 13, lines 16-19). Furthermore, the dormant network connections are connections that are not being used to transmit traffic channel data. (Specification, page 11, lines 4-7).

Yet another embodiment of the present invention as claimed in pending independent claim 9, and claims 10-14 depending therefrom, relates to a mobile station configured to inform a packet data services network of dormant network connections associated with the mobile station when the mobile station moves from a first infrastructure element of the packet data services network to a second infrastructure element of the packet data services network. (Specification, page 11, lines 1-7). The mobile station includes an antenna, a processor coupled to the antenna, and a processor-readable medium accessible by the processor and containing a set of instructions executable by the processor to modulate and transmit from the mobile station a message including a number of dormant network connections associated with the mobile station and a reduced list of identifiers associated with the dormant network connections when the mobile station moves from the first infrastructure element of the packet data services network to the second infrastructure element. (Specification, page 4, lines 18-23; page 13, lines 16-19). Furthermore, the dormant network connections are connections that are not being used to transmit traffic channel data. (Specification, page 11, lines 4-7).

Yet a further embodiment of the present invention as claimed in pending independent claim 15, and claims 16-20 depending therefrom, relates to a mobile station configured to inform a packet data services network of dormant network connections associated with the mobile station when the mobile station moves from a first infrastructure element of the packet data services network to a second infrastructure element of the packet data services network. (Specification, page 4, lines 32-36; page 13, lines 16-19). The mobile station includes a device configured to transmit from the mobile station a message including a number of dormant network connections associated with the mobile station and a reduced list of identifiers associated with the dormant network connections when the mobile station moves from the first infrastructure element of the packet data services network to the second infrastructure element. (Specification, page 4, lines 24-31; page 13, lines 16-19). Furthermore, the dormant network connections are connections that are not being used to transmit traffic channel data. (Specification, page 11, lines 4-7).

Yet another embodiment of the present invention as claimed in pending independent claim 21, and claims 22-26 depending therefrom, relates to a mobile station configured to inform a packet data services network of dormant network connections associated with the mobile station when the mobile station moves from a first infrastructure element of the packet data services network to a second infrastructure element of the packet data services network. (Specification, page 4, lines 32-36; page 13, lines 16-19). The mobile station includes a means for transmitting from the mobile station a message including a number of dormant network connections associated with the mobile station and a reduced list of identifiers associated with the dormant network connections when the mobile station moves from the first infrastructure element of the packet data services network to the second infrastructure element. (Specification, page 4, line 36 through page 5, line 3; page 13, lines 16-19). Furthermore, the dormant network connections are connections that are not being used to transmit traffic channel data. (Specification, page 11, lines 4-7).

Yet another embodiment of the present invention as claimed in pending independent claim 27, and claims 28-29 depending therefrom, relates to a packet data services node configured to maintain Point to Point Protocol connection tables of dormant network connections associated with a mobile station when the mobile station moves from a first infrastructure element of a packet data services network to a second infrastructure element of the packet data services network. (Specification, page 11, lines 31-33). The packet data services node includes a radio-access-network-PDSN channel interface, a processor coupled to the radio-access-network-PDSN channel interface, and a processor-readable medium accessible by the processor. (Specification, page 4, lines 3-6; page 7, lines 28-30). The processor-readable medium further containing a set of instructions executable by the processor to update the dormant network connection information associated with the mobile station. (Specification, page 11, lines 24-27). Furthermore, the dormant network connection information is information relating to a connection that is not being used to transmit traffic channel data. (Specification, page 11, lines 4-7).

(6) GROUND OF REJECTION TO BE REVIEWED ON APPEAL

(1) Whether claim 1 and 2 are patentable under 35 U.S.C. § 102(b) over U.S. Patent No. 5,577,168 to Haas et al. (hereinafter, "the Haas reference").

(2) Whether claims 5, 6, 9, 11-15, 17-21 and 23-26 are patentable under 35 U.S.C. § 103(a) over the Haas reference.

(3) Whether claims 3, 4, 7, 8, 10, 16, 22 and 27-29 are patentable under 35 U.S.C. § 103(a) over the Haas reference in view of U.S. Patent No. 6,496,491 to Chuah et al. (hereinafter, "the Chuah reference").

(7) ARGUMENT

A. Authorities Relied Upon

(1) 35 U.S.C. §102

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

(2) 35 U.S.C. §103

To establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), three basic criteria must be met. First, there must be some suggestion or motivation, either in the references

themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the cited prior art reference must teach or suggest all of the claim limitations. Furthermore, the suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Appellant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

It is improper to combine references where the references teach away from their combination. MPEP § 2145 (citing *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983)).

A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert.denied*, 469 U.S. 851 (1984).

The Federal Circuit has repeatedly cautioned against employing hindsight by using the appellant's disclosure as a blueprint to reconstruct the claimed invention out of isolated teaching of the prior art. *See, e.g., Grain Processing Corp. v. American-Maize Prods. Co.*, 840 F.2d 902, 907, 5 U.S.P.Q.2d 1788, 1792 (Fed. Cir. 1988).

B. Summary of Cited Prior Art

The Haas reference discloses, teaches or suggests a packetized cellular system in which a mobile quasi-periodically transmits a beacon signal containing an ID number to a first base station in the cell in which it is located for storage with the ID's of other active mobiles in the cell. (Haas Abstract.) A copy of a list of the active mobiles in that cell is transmitted to all

adjacent cells where they are placed on non-active list. Control of a mobile is handed-off to a second base station upon the receipt of a transmitted ID number of the mobile at the second base station. (Haas Abstract.)

The Chuah reference teaches or suggests an apparatus for transferring packet data incorporating a "handoff" feature that allows the transfer of an existing PPP connection from one packet server to another packet server. (Chuah Abstract.) Such a handoff control message or call continue transaction can be initiated by any of the servers involved in the transactions. (Chuah Abstract.) If, for example, the user moves out of the region served by a first server into a region served by another packet server, then a handoff control message transaction is initiated by one of the servers. (Chuah Abstract.)

C. Arguments for Patentability of Claims 1 and 2

- (1) *Claims 1 and 2 are patentable because the cited reference do not describe all of the claim limitations.*

In the Final Office Action, the Examiner rejected claims 1 and 2 under 35 U.S.C. § 102(b) based on the Haas reference.

Appellant submits that the Haas references does not and cannot anticipate under 35 U.S.C. § 102 the presently claimed invention of independent claim 1, and claim 2 depending therefrom, because the Haas reference does not describe, either expressly or inherently, the identical inventions in as complete detail as are contained in the claims.

Appellant respectfully disagrees that the Haas reference anticipates Appellant's invention as claimed in independent claim 1 which reads:

1. A method of optimizing radio-access-network-packet-data-service-node interface communications channel resources in a communications network *when a mobile station moves from a first infrastructure element to a second infrastructure element associated with a packet data services node of the communications network*, the method comprising the step of:
transmitting from the second infrastructure element associated with the packet data services node a message including a number of dormant network connections

associated with the mobile station and a reduced list of identifiers associated with the dormant network connections, wherein the dormant network connections are connections that are not being used to transmit traffic channel data. (Emphasis added.)

In contrast, the Haas reference discloses:

A packetized cellular system in which a mobile quasi-periodically transmits a beacon signal containing an ID number to a first base station in the cell in which it is located for storage with the ID's of other active mobiles in the cell. A copy of a list of the active mobiles in that cell is transmitted to all adjacent cells where they are placed on non-active list. Control of a mobile is handed-off to a second base station upon the receipt of a transmitted ID number of the mobile at the second base station. (Haas Abstract.)

The Final Office Action alleges:

Regarding claim 1, Haas teaches a *method for transmitting from* a second infrastructure element (e.g., *one of cells 6 in FIG. 1*) *associated with* a packet data services node (e.g., *base station 10*, see col. 2, line 1-col. 4, line 67 regarding data traffic in a packet switched system) *a message* (e.g., *list of active mobiles associated with the cell*, or second infrastructure element, see col. 3, lines 50-64) *including* a number of network connections (e.g., *connections of the active mobiles in the second infrastructure element*) *associated with a mobile station* (e.g., mobile 14) and a reduced list of identifiers (e.g., ID numbers) and enhanced information (e.g., addresses of destinations and channel number, see col. 3, lines 58-64) *associate with the connections*, . . . (Final Office Action, pp. 4-5; emphasis added.)

If the Final Office Action's citation of the description of the elements from the Haas reference are combined, from the highlighted quotations above, into a single recitation, it becomes immediately apparent that the disclosure of the Haas reference cannot anticipate under 35 U.S.C. § 102 Appellant's invention as claimed in independent claim 1. Specifically, the aggregated Haas reference citations of the Final Office Action describing

"... a method for transmitting from ... one of cells 6 in FIG. 1[] associated with ... base station 10 ... a ... list of active mobiles associated with the cell ... including ... connections of the active mobiles in the second infrastructure element[] associated with a mobile station ..."

do not describe and anticipate Appellant's claimed invention of

"[a] method . . . in a communications network when a mobile station moves from a first infrastructure element to a second infrastructure element associated with a packet data services node of the communications network, the method comprising the step of:

transmitting from the second infrastructure element . . . a message including a number of dormant network connections associated with the mobile station . . .”

By way of emphasis, Appellant’s claim language specifically recites “a message including a number of dormant network connections associated with the mobile station . . .” The Haas reference does not describe “a number of . . . connections associated with the mobile station” but contrastingly describes “the address of the destinations of *the connections* (if such exist) of the active mobiles 14 in the coverage area of the base station . . .” (Haas, col. 3, lines 61-63; emphasis added.)

Therefore, independent claim 1 cannot be anticipated by the Haas reference under 35 U.S.C. § 102. Accordingly, such claim is allowable over the cited prior art and Appellant respectfully requests that such rejections be withdrawn.

(2) *Claim 2 is allowable, among other reasons, as depending either directly or indirectly from claim 1, which is allowable.*

Claim 2 is allowable, among other reasons, as depending either directly or indirectly from claim 1, which is allowable. In effect, the cited reference does not describe all of the claim limitations.

D. Arguments for Patentability of Claims 5, 6, 9, 11-15, 17-21 and 23-26

(1) *Claims 5, 6, 9, 11, 15, 17, 21 and 23 are patentable because the cited references do not teach or suggest all of the claim limitations.*

Claims 5, 6, 9, 11, 15, 17, 21 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Haas reference. Appellant respectfully traverses this rejection, as hereinafter set forth.

The 35 U.S.C. § 103(a) obviousness rejection of claims 5, 6, 9, 11, 15, 17, 21 and 23 are improper because the elements for a prima facie case of obviousness are not met. Specifically,

the rejection fails to meet the criterion that the prior art reference must teach or suggest all the claims limitations.

Regarding independent claim 5 (and claim 6 depending therefrom), independent claim 9 (and claim 11 depending therefrom), independent claim 15 (and claim 17 depending therefrom), and independent claim 21 (and claim 23 depending therefrom), Appellant sustains the above-proffered arguments that the Haas reference does not teach, suggest or motivate Appellant's invention as claimed.

Specifically, the aggregated Haas reference citations of the Final Office Action describing:

"... a method for transmitting from ... one of cells 6 in FIG. 1[] associated with ... base station 10 ... a ... list of active mobiles associated with the cell ... including ... connections of the active mobiles in the second infrastructure element[] associated with a mobile station ..."

do not teach, suggest or motivate Appellant's invention as claimed in the respective independent claims, namely:

5. ***A method ... , the method comprising the step of: transmitting from the mobile station a message including a number of dormant network connections associated with the mobile station and ...***
9. ***A mobile station ... , the mobile station comprising: an antenna; a processor coupled to the antenna; and a processor-readable medium accessible by the processor and containing a set of instructions executable by the processor to modulate and transmit from the mobile station a message including a number of dormant network connections associated with the mobile station and ...***
15. ***A mobile station ... , the mobile station comprising: a device configured to transmit from the mobile station a message including a number of dormant network connections associated with the mobile station and ...***
21. ***A mobile station ... , the mobile station comprising: means for transmitting from the mobile station a message including a number of dormant network connections associated with the mobile station and ...***

Accordingly, since the Haas reference does not teach, suggest, or motivate Appellant's invention as claimed in claims 5, 6, 9, 11, 15, 17, 21 and 23, the Haas reference cannot render obvious under 35 U.S.C. § 103 Appellant's invention as claimed. Therefore, Appellant respectfully requests that such rejections be withdrawn.

The present rejection is improper on yet an additional ground. Specifically, the Final Office Action further states:

While *Haas disclose the message* is maintained within, and transmitted from a base station and *not a mobile station*, it is *generally considered to be within the ordinary skill in the art to shift the location of parts absent a showing of unexpected results*. Thus, at the time of the invention it would have been *obvious* to one of ordinary skill in the art *to shift the location of database listing from the base station to mobile station* since it is generally considered to be within the ordinary skill in the art to shift the location of parts absent a showing of unexpected results. The contention of *obvious choice in design* can be overcome if Applicant establishes unexpected results. In re Japikse, 86 USPQ 70 (CCPA 1950). (Final Office Action, pp. 5-6; emphasis added.)

While Appellant submits that the use of the "obvious choice in design" rejection is an improper use of a well established basis for unpatentability, Appellant further submits that the mere fact that a communication system that relies upon the efficient location of data for minimizing the unnecessary transmission of data is a basis alone for overcoming the "unexpected results" burden. Therefore, Appellant submits that not only is the "obvious choice" rejection improper and should be withdrawn, but also the burden of "unexpected results" has been met. Appellant also respectfully requests that the rejection be withdrawn based upon meeting the burden of unexpected results.

(2) *Claims 6, 12-14, 18-20 and 24-26 are each allowable, among other reasons, as depending either directly or indirectly from independent claims 5, 9, 15, 21, which are allowable.*

The nonobviousness of the independent claims 5, 9, 15, 21 precludes a rejection of the dependent claims 6, 12-14, 18-20 and 24-26 respectively depending therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. See *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, Appellant requests that the rejection of claims 6, 12-14, 18-20 and 24-26 be withdrawn.

E. Arguments for Patentability of Claims 3, 4, 7, 8, 10, 16, 22 and 27-29

- (1) *Claims 3, 10, 16, 22, 27 and 29 are patentable because the cited references do not teach or suggest all of the claim limitations.*

Claims 3, 10, 16, 22, 27 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Haas reference in view of the Chuah reference. Appellant respectfully traverses this rejection, as hereinafter set forth.

The 35 U.S.C. § 103(a) obviousness rejection of claims 3, 10, 16, 22, 27 and 29 are improper because the elements for a prima facie case of obviousness are not met. Specifically, the rejection fails to meet the criterion that the prior art reference must teach or suggest all the claims limitations.

The Final Office Action alleges:

... However, Haas may not specifically disclose the connections are PPP connections, wherein the connection table would be reduced entry PPP connection table.

Chuah also teaches a method for packet data communications experiencing handoffs, and further, teaches a specific method for allowing the transfer of files and database access connections wherein a PPP connection is transferred from one packet server to another packet server (e.g., see abstract) without having to terminate a current PPP connection and then re-establish a new PPP connection (e.g., see col. 2, lines 1-9). Chuah also teaches a connection table is provided for the PPP connections (e.g., see col. 14, lines 35-41). The teachings of Chuah provide a mobile communications user with the ability to change connections from one network access server to another without having to terminate and then re-establish connections (e.g., see col. 1, lines 55-col. 2, line 37). As discussed, Haas also discloses mobile communications may include file transfer and database access (e.g., see col. 1, lines 15-23), however, Haas may not specifically disclose an embodiment for achieving the transferring of a PPP connection from one packet server to another packet server without having to terminate a current PPP connection and then re-establish a new PPP connection. (Final Office Action, pp. 7-8).

Appellant herein sustains the above proffered arguments relating to the lack of teaching and suggestion in the Haas reference regarding Appellant's invention as presently claimed, namely:

3. ***A method of simplifying Packet Control Function network element functionality*** when a mobile station moves from a first infrastructure element of a packet data services network to a second infrastructure element of the packet data services network, the method comprising the step of:

maintaining a reduced entry PPP connection table that includes radio access network (RAN) PDSN interface (RPI) communication pipe identifiers. (Emphasis added).

The Haas reference does not teach or suggest “maintaining a reduced entry PPP connection table that includes radio access network (RAN) PDSN interface (RPI) communication pipe identifiers.” As shown above, while the Haas reference may teach or suggest a base station maintaining a list of active mobiles, the address of the destinations of the connection of the active mobiles, and the transmission channel numbers associated with the active mobile, the Haas reference does not teach or suggest the elements of Appellant’s invention as claimed. (Haas, col. 3, lines 50-64).

Additionally, the Chuah reference does not teach or suggest “maintaining a reduced entry PPP connection table that includes radio access network (RAN) PDSN interface (RPI) communication pipe identifier.” Column 14, lines 35-41 of the Chuah reference were cited in the Non-Final Office Action prior to the Final Office Action as teaching a PPP connection table. The cited portion of the Chuah reference refers to a “connection table similar to that shown in Table Four.” (Chuah, col. 14, lines 37-38). The connection table of Table 4 in the Chuah reference is “for each direction of communication for each established VPN session with a remote user.” (Chuah, col. 6, lines 8-10). The Chuah reference teaches a VPN connection table, however, the VPN connection table of the Chuah reference is not a “reduced entry PPP connection table that includes radio access network (RAN) PDSN interface (RPI) communication pipe identifiers.”

Therefore, neither the Haas reference nor the Chuah reference, either individually or in any proper combination, teaches, suggest or motivates Appellant’s invention as claimed. Therefore, Appellant respectfully requests that such a rejection be withdrawn.

Regarding independent claim 27, Appellant’s invention as claimed recites:

27. ***A packet data services node configured to maintain Point to Point Protocol connection tables of dormant network connections associated with a mobile station*** when the mobile station moves from a first infrastructure element of a packet data services network to a second infrastructure element of the packet data services network, ***the packet data services node comprising:***

a radio-access-network-PDSN channel interface;
a processor coupled to the radio-access-network-PDSN channel interface; and
a processor-readable medium accessible by the processor and containing a set of instructions executable by the processor **to update the dormant network connection information associated with the mobile station**, wherein the dormant network connection information is information relating to a connection that is not being used to transmit traffic channel data. (Emphasis added).

Appellant sustains the above-proffered arguments that neither the Haas reference nor the Chuah reference, either individually or in any proper combination, teach, suggest or motivate Appellant's invention as presently claimed. Accordingly, the rejection of claim 27 should be withdrawn.

(2) *Claims 4, 7, 8, 10, 16, 22, 28 and 29 are each allowable, among other reasons, as depending either directly or indirectly from independent claims 3, 5, 9, 15, 21 and 27, which are allowable.*

Regarding dependent claims 4, 7, 8, 10, 16, 22, 28 and 29, the nonobviousness of the respective independent claims of claims 3, 5, 9, 15, 21 and 27, precludes a rejection of the dependent claims therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. See In re Fine, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), see also MPEP § 2143.03. Therefore, Appellant requests that the rejection of claims 4, 7, 8, 10, 16, 22, 28 and 29 be withdrawn.

(8) CLAIMS APPENDIX

LISTING OF PENDING CLAIMS:

1. (Previously Presented) A method of optimizing radio-access-network-packet-data-service-node interface communications channel resources in a communications network when a mobile station moves from a first infrastructure element to a second infrastructure element associated with a packet data services node of the communications network, the method comprising the step of:
transmitting from the second infrastructure element associated with the packet data services node a message including a number of dormant network connections associated with the mobile station and a reduced list of identifiers associated with the dormant network connections, wherein the dormant network connections are connections that are not being used to transmit traffic channel data.
2. (Original) The method of claim 1, wherein said reduced list does not include Service Request Identifiers.
3. (Previously Presented) A method of simplifying Packet Control Function network element functionality when a mobile station moves from a first infrastructure element of a packet data services network to a second infrastructure element of the packet data services network, the method comprising the step of:
maintaining a reduced entry PPP connection table that includes radio access network (RAN) PDSN interface (RPI) communication pipe identifiers.
4. (Original) The method of claim 3, wherein said reduced entries do not include Service Request Identifiers.

5. (Previously Presented) A method of optimizing the Air Interface traffic channel resources in a communications network when a mobile station moves from a first infrastructure element of a packet data services network to a second infrastructure element of the packet data services network, the method comprising the step of:

transmitting from the mobile station a message including a number of dormant network connections associated with the mobile station and enhanced information associated with the dormant network connections when the mobile station moves from a first infrastructure element of the packet data services network to a second infrastructure element, wherein the dormant network connections are connections that are not being used to transmit traffic channel data.

6. (Original) The method of claim 5, wherein said enhanced information includes packet zone identification information.

7. (Original) The method of claim 5, wherein said enhanced information is used to conserve traffic channel resources by reducing Point to Point Protocol session negotiation.

8. (Original) The method of claim 5, wherein said enhanced information is used to conserve traffic channel resources by reducing Mobile Internet Protocol registration.

9. (Previously Presented) A mobile station configured to inform a packet data services network of dormant network connections associated with the mobile station when the mobile station moves from a first infrastructure element of the packet data services network to a second infrastructure element of the packet data services network, the mobile station comprising:

an antenna;

a processor coupled to the antenna; and

a processor-readable medium accessible by the processor and containing a set of instructions executable by the processor to modulate and transmit from the mobile station a message including a number of dormant network connections associated with the mobile station and a reduced list of identifiers associated with the dormant network connections when the mobile station moves from the first infrastructure element of the packet data services network to the second

infrastructure element, wherein the dormant network connections are connections that are not being used to transmit traffic channel data.

10. (Original) The mobile station of claim 9, wherein the dormant network connections comprise point-to-point protocol connections.

11. (Original) The mobile station of claim 9, wherein the first and second infrastructure elements comprise packet data service nodes.

12. (Original) The mobile station of claim 9, wherein the identifiers are not comprised of service reference identifiers.

13. (Original) The mobile station of claim 9, wherein the message comprises an origination message including an indicator that the dormant network connections are dormant.

14. (Original) The mobile station of claim 9, wherein the message comprises packet zone identification information.

15. (Previously Presented) A mobile station configured to inform a packet data services network of dormant network connections associated with the mobile station when the mobile station moves from a first infrastructure element of the packet data services network to a second infrastructure element of the packet data services network, the mobile station comprising:

a device configured to transmit from the mobile station a message including a number of dormant network connections associated with the mobile station and a reduced list of identifiers associated with the dormant network connections when the mobile station moves from the first infrastructure element of the packet data services network to the second infrastructure element, wherein the dormant network connections are connections that are not being used to transmit traffic channel data.

16. (Original) The mobile station of claim 15, wherein the dormant network connections comprise point-to-point protocol connections.

17. (Original) The mobile station of claim 15, wherein the first and second infrastructure elements comprise packet data service nodes.

18. (Original) The mobile station of claim 15, wherein the identifiers are not comprised of service reference identifiers.

19. (Original) The mobile station of claim 15, wherein the message comprises an origination message including an indicator that the dormant network connections are dormant.

20. (Original) The mobile station of claim 15, wherein the message comprises packet zone identification information.

21. (Previously Presented) A mobile station configured to inform a packet data services network of dormant network connections associated with the mobile station when the mobile station moves from a first infrastructure element of the packet data services network to a second infrastructure element of the packet data services network, the mobile station comprising:

means for transmitting from the mobile station a message including a number of dormant network connections associated with the mobile station and a reduced list of identifiers associated with the dormant network connections when the mobile station moves from the first infrastructure element of the packet data services network to the second infrastructure element, wherein the dormant network connections are connections that are not being used to transmit traffic channel data.

22. (Original) The mobile station of claim 21, wherein the dormant network connections comprise point-to-point protocol connections.

23. (Original) The mobile station of claim 21, wherein the first and second infrastructure elements comprise packet data service nodes.

24. (Original) The mobile station of claim 21, wherein the identifiers are not comprised of service reference identifiers.

25. (Original) The mobile station of claim 21, wherein the message comprises an origination message including an indicator that the dormant network connections are dormant.

26. (Original) The mobile station of claim 21, wherein the message comprises packet zone identification information.

27. (Previously Presented) A packet data services node configured to maintain Point to Point Protocol connection tables of dormant network connections associated with a mobile station when the mobile station moves from a first infrastructure element of a packet data services network to a second infrastructure element of the packet data services network, the packet data services node comprising:

a radio-access-network-PDSN channel interface;

a processor coupled to the radio-access-network-PDSN channel interface; and

a processor-readable medium accessible by the processor and containing a set of instructions executable by the processor to update the dormant network connection information associated with the mobile station, wherein the dormant network connection information is information relating to a connection that is not being used to transmit traffic channel data.

28. (Original) The packet data services node of claim 27, wherein the dormant network connection information associated with the mobile station maintained does not include service reference identifiers.

29. (Previously Presented) The packet data services node of claim 27, wherein the first and second infrastructure elements comprise packet data service nodes.

(9) EVIDENCE APPENDIX

NONE

(10) RELATED PROCEEDINGS APPENDIX

NONE

CONCLUSION

Appellant respectfully requests the reversal of the rejections of currently pending claims 1 through 29 for the reasons set forth above.

Respectfully submitted,

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